NASA TECHNOLOGY MAY HELP **VICTIMS OF DIABETES**

GILRUTH CENTER NEWS

http://www4.jsc.nasa.gov/ah/exceaa/Gilruth/Gilruth.htm

Hours: The Gilruth Center is open from 6:30 a.m.-10 p.m. Monday-Thursday, 6:30 a.m.-9 p.m. Friday, and 9 a.m.-2 p.m. Saturday. Contact the Gilruth Center at (281) 483-3345.

Sign up policy: All classes and athletic activities are on a first-come, first-served basis. Sign up in person at the Gilruth Center and show a yellow Gilruth or weight room badge. Classes tend to fill up two weeks in advance. Payment must be made in full, cash or by check, at the time of registration. No registration will be taken by telephone. For more information, call x33345.

Gilruth badges: Required for use of the Gilruth Center. Employees, spouses, eligible dependents, NASA retirees and spouses may apply for photo identification badges from 7:30 a.m.-9 p.m. Monday-Friday and 9 a.m.-2 p.m. Saturdays. Cost is \$10. Dependents must be between 16 and 23 years old.

Nutrition intervention program: Six-week program includes lectures, a private consultation with the dietitian and blood analysis to chart your progress. Program is open to all employees, contractors and spouses. For details call Tammie Shaw at x32980.

Defensive driving: One-day course is offered once a month at the Gilruth Center. Pre-registration required. Cost is \$25. Call for next available class.

Stamp club: Meets every second and fourth Monday at 7 p.m. in Rm. 216.

Weight safety: Required course for employees wishing to use the Gilruth weight room. Pre-registration is required. Cost is \$5. Annual weight room use fee is \$90. The cost for additional family members is \$50.

Exercise: Low-impact class meets from 5:15-6:15 p.m. Mondays and Wednesdays. Cost is \$24 for eight weeks.

Step/bench aerobics: Low-impact cardiovascular workout. Classes meet from 5:15-6:15 p.m. Tuesdays and Thursdays. Cost is \$32 for eight weeks. Kristen Taragzewski, instructor.

Yoga: Stretching class of low-impact exercises designed for people of all ages and abilities in a Westernized format. Meets Thursdays 5-6 p.m. Cost is \$32 for eight weeks. Call Darrell Matula, instructor, at x38520 for more information.

Ballroom dancing: Classes meet from 6:30-7:30 p.m. Thursdays for beginners, 8:30-9:30 p.m. for intermediate and 7:30-8:30 p.m. for advanced. Cost is \$60 per couple.

Country and western dancing: Beginner class meets 7-8:30 p.m. Monday. Advanced class (must know basic steps to all dances) meets 8:30-10 p.m. Monday. Cost is \$20 per

Fitness program: Health-related fitness program includes a medical screening examination and a 12-week individually prescribed exercise program. For more information call Larry Wier at x30301.

Aikido: Martial arts class for men and women meets 5 - 6 p.m. Tuesdays and Wednesdays. No special equipment or knowledge is needed to participate. Aikido teaches balance and control to defend against an opponent without using strength or force. Beginning and advanced classes start each month. Cost is \$35 per month.

Some American diabetics may soon be using NASA virtual-reality technology to peer inside the human body and manage the effects of the disease.

Preliminary observations show that artificialvision technology, used to help pilots train to fly in poor visibility, helps diabetics at risk for nerve damage visualize and control blood flow to the arms and legs.

In studies this fall, patients will use "biofeedback" - self-control techniques, including changes in breathing and muscle flexing - to increase their blood flow, which will be measured through sensors attached to their fingertips. The system will use skinsurface pulse and temperature measurements to create a computergenerated image of what is actually happening to blood vessels under the skin. Just as pilots use artificial vision to "see" into bad weather, patients will use this virtual reality device to "see" beneath their skin.

The graphics technologies used in the study have been used in cockpit artificialvision systems to help pilots see in low- or no-visibility situations, and to help designers study air-flow patterns around new aircraft shapes. In this fall's studies, diabetes patients will wear a 3-D virtualreality headset to "see" the contraction and expansion of their own blood vessels.

DATES C, DATA



October 25

Alzheimer's support group meets: The Clear Lake Alzheimer's Caregiver Support Group will meet at 7:30 p.m. to 9 p.m. October 25 in the first floor conference room, St. John Hospital West building, Nassau Bay. For more information, contact Nancy Malley at (281) 480-8917 or John Gouveia (281) 280-8517.

October 27

Astronomy seminar: The JSC Astronomy Seminar Club will meet at noon October 27 and November 3 and 10 in Bldg. 31, Rm. 248A. For details call Al Jackson at x35037.

Spaceland Toastmasters meet: The Spaceland Toastmasters will meet at 7 a.m. October 27 and November 3 and 10 at the House of Prayer Lutheran Church. For additional information, call George Salazar at x30162.

Spaceteam Toastmasters meet: The Spaceteam Toastmasters will meet at 11:30 a.m. October 27 and November 3 and 10 at United Space Alliance, 600 Gemini. For additional information call Patricia Blackwell at (281) 280-6863.

October 28

Communicators meet: The Clear Lake Communicators, a Toastmasters club, will meet at 11:30 a.m. October 28 and November 4 and 11 at Freeman Library, 16602 Diana Lane. For more information, call Allen Prescott at (281) 282-3281 or Mark Caronna at (281) 282-4306.

Radio Club meets: The JSC Amateur Radio Club will meet at 6:30 p.m. October 28 at the Piccadilly, 2465 Bay Area Blvd. For more information, call Larry Dietrich at x39198.

October 29

Fall festival: Seabrook's Ed White Memorial Youth Center

hosts its annual community Fall Festival on Friday, October 29 from 6:30 p.m. to 8:30 p.m. The center is located at 1513 3rd Street in Seabrook, and will feature game booths, a creepy house, bake walk, food and face painting. Call (281) 474-2853 for more information.

October 31

Community Walk: Juvenile Diabetes Foundation's Walk to Cure Diabetes will be held at the University of Houston Clear Lake Campus October 31. Bicycling and rollerblading are permitted. Check-in begins at 8 a.m. The event starts at 9 a.m. Call Jennifer Gammill at (713) 334-4400 for registration information.

November 1

NSBE meets: The National Society of Black Engineers will meet at 6:30 p.m. November 1 at Texas Southern University, School of Technology, Rm. 316. For details, call Kimberly Topps at (281) 280-2917.

November 4

Warning System Test: The site-wide Employee Warning System will perform its monthly audio test at noon November 4. For more information, call Bob Gaffney at x34249.

November 9

Aero Club meets: The Bay Area Aero Club will meet at 7 p.m. November 9 at the Houston Gulf Airport clubhouse at 2750 FM 1266 in League City. For more information call Larry Hendrickson at x32050.

CLA-NSS meets: The Clear Lake Area chapter of the National Space Society will meet at 6:30 p.m. November 9 at the Freeman Memorial Branch Library, 16602 Diana Lane. For more information call Murray Clark at (281) 367-2227.

BRAIN CANCER SURGERIES SUCCESSFUL **USING SPACE-AGE PROBES**

Surgeons have used a special lighting technology, developed by a Wisconsin company to conduct plant research in space, in two successful operations to treat brain cancer on Earth.

"A young woman operated on in May has fully recovered with no complications and no evidence of the tumor coming back," said Dr. Harry Whelan, a pediatric neurologist at the Medical College of Wisconsin in Milwaukee. "A young man who underwent surgery in August is still recovering, but everything looks great, and thus far there is no evidence of the tumor reoccurring."

For the treatment technique, a surgeon uses tiny pinhead-size Light Emitting Diodes - a source releasing long light waves - to activate light-sensitive, tumortreating drugs.

To ensure other promising LED medical applications are investigated, NASA recently selected a Phase II Small Business Innovation Research proposal for negotiation with Quantum Devices Inc., Barneveld, WI, the company that developed LEDs for commercial plantgrowth investigations on the space shuttle.

"NASA was pleased to fund the first phase of the research leading to these two successful surgeries," said Helen Stinson, manager of the Small Business Innovative Research program, which awarded the grant. The program is part of NASA's Technology Transfer Department at the Marshall Space Flight Center. "We're happy to fund Quantum as it continues to explore cutting-edge medical uses for the LEDs."

SPACE CENTER ROUNDUP

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